

P805 SERIES

INDUSTRIAL PRESSURE TRANSDUCER



DESCRIPTION

The P805 Industrial Pressure Transducers are compact, rugged pressure transmitters with silicon piezoresistive sensors packaged in stainless steel housing. These precision engineered devices provide absolute, gauge, and sealed gauge pressure measurement up to 8700 psig with a variety of output signals available. These devices are suitable for applications across process control, including hydraulic systems and valves, refrigeration and HVAC controls, level measurement, and test equipment. In addition to pressure ranges and output signals, a wide range of process and electrical connection options are available to meet any end user demands.

APPLICATIONS

- Process Control Systems
- Hydraulic Systems and Valves
- Refrigeration and HVAC Controls
- Pumps and Compressors
- Test Equipment

KEY FEATURES:

- Piezoresistive Pressure Sensor
- Pressure ranges from -1 to 600 Bar (8700 psi)
- Absolute, Gauge, and Sealed Gauge Devices
- Output signals: 4 – 20mA, 0 – 10V, 0 – 5V, and others
- Calibrated and Temperature Compensated
- Stainless Steel Construction
- Variety of Pressure and Electrical Connections

PERFORMANCE SPECIFICATIONS

| Parameter | Value | Units | Notes |
|-------------------------|--------------------|--------|------------------|
| General | | | |
| Pressure Range | -1 - 600 | bar | -14.5 - 8700 psi |
| Overpressure | 1.5xFS | | |
| Environmental | | | |
| Operating Temp. Range | -20 - +85 | °C | -4 °F - +185 °F |
| Compensated Temp. Range | -10 - +70 | °C | 14 °F - +158 °F |
| Storage Temp. Range | -40 - +125 | °C | -40 °F - +257 °F |
| Vibration | 10 | g | 20 - 2000Hz |
| Shock | 100 | g | 10ms |
| Cycles | 10x10 ⁶ | cycles | |

Electrical

| | |
|-----------------------|---|
| Output Signal | 4-20mA, 0-5Vdc, 1-5Vdc, 0-10Vdc, 0.5-4.5Vdc(ratiometric) |
| Power Supply(Vs) | 12-36Vdc, 12-36Vdc, 12-36Vdc, 15-36Vdc, 5Vd |
| Load Resistance | <(Vs-12)/0.02A (For current output), >10kΩ (For voltage output) |
| Insulation Resistance | 100MΩ@50Vdc |

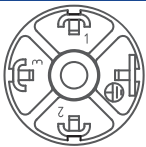
Physical Specifications

| | |
|---------------------|--|
| Media Compatibility | All media compatible with 316L stainless steel |
| Housing | 304 stainless steel |
| Diaphragm | 316L stainless steel |
| Seal Ring | Viton or NBR |
| Oil Filling | Silicone oil |
| Protection | IP65(Standard), IP66(only for cable outlet) |
| Net Weight | Approx.185g |

| Parameter | Min. | Typical | Max. | Units |
|---------------------|------|---------|------|-----------|
| Accuracy | 0.1 | 0.25 | 0.5 | %FSO |
| Temp Coeff - Zero | | ±0.75 | ±1.5 | %FSO |
| Temp Coeff - Span | | ±0.75 | ±1.5 | %FSO |
| Long-Term Stability | | ±0.2 | ±0.3 | %FSO/year |

CONNECTION DIAGRAMS

Connector DIN43650



| | 2-wire(current) | 3-wire(voltage) |
|---------|-----------------|-----------------|
| Supply+ | 1 | 1 |
| Signal+ | 2 | 3 |
| Gnd | - | 2 |

Connector M12x1(4-pin)



| | 2-wire(current) | 3-wire(voltage) |
|---------|-----------------|-----------------|
| Supply+ | 1 | 1 |
| Signal+ | 2 | 3 |
| Gnd | - | 2 |

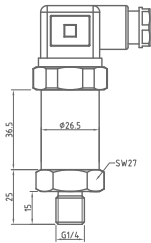
Cable outlet

| | 2-wire(current) | 3-wire(voltage) |
|---------|-----------------|-----------------|
| Supply+ | red | red |
| Signal+ | black | green |
| Gnd | - | black |

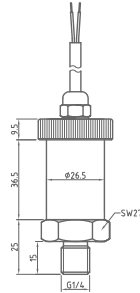
DIMENSIONS

Dimensions (in mm)

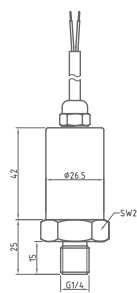
Connector DIN43650



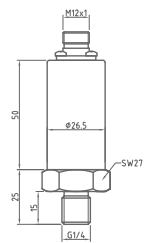
Hirschmann cable outlet



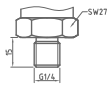
Cable outlet with PVC-cable



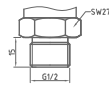
M12x1, 4-pin



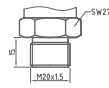
Mechanical Connection (in mm)



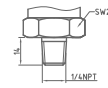
G1/4



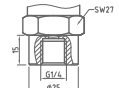
G1/2



M20x1.5



1/4NPT



G1/4(F)

ORDER GUIDE

P805 Pressure Transmitter

| | | | | | | | | | |
|------|--------------------------------|---|------------|-----------------------|---|----|---|--|--|
| P805 | Option 1: Model | | | | | | | | |
| | Option 2: Pressure Ranges | | | | | | | | |
| N001 | -1...0bar | 0016 | 0...1.6bar | 0600 0...60bar | | | | | |
| N002 | -0.35...0bar | 0025 | 0...2.5bar | 1000 0...100bar | | | | | |
| N003 | -0.2...0bar | 0040 | 0...4bar | 2500 0...250bar | | | | | |
| 0001 | 0...0.1bar | 0060 | 0...6bar | 4000 0...400bar | | | | | |
| 0003 | 0...0.35bar | 0100 | 0...10bar | 6000 0...600bar | | | | | |
| 0007 | 0...0.7bar | 0160 | 0...16bar | Cxxx Customized range | | | | | |
| 0010 | 0...1bar | 0250 | 0...25bar | | | | | | |
| P805 | Option3: Pressure Type | | | | | | | | |
| | G | gauge | | | | | | | |
| A | absolute | | | | | | | | |
| S | sealed gauge | | | | | | | | |
| P805 | Option4: Output Signal | | | | | | | | |
| | 42 | 4-20mA | | | | | | | |
| | 05 | 0-5Vdc | | | | | | | |
| | 15 | 1-5Vdc | | | | | | | |
| | 10 | 0-10Vdc | | | | | | | |
| | 45 | 0.5-4.5 | | | | | | | |
| P805 | Option5: Accuracy | | | | | | | | |
| | 02 | 0.25%FSO | | | | | | | |
| | 05 | 0.5%FSO | | | | | | | |
| P805 | Option6: Electrical Connection | | | | | | | | |
| | D | Connector DIN43650 | | | | | | | |
| | H | Hirschmann cable outlet,length=1.5m | | | | | | | |
| | C | Cable outlet with PVC-cable,length=1.5m | | | | | | | |
| | M | M12x1, 4-pin | | | | | | | |
| P805 | Option7: Mechanical Connection | | | | | | | | |
| | M2 | M20x1.5(male) | N1 | 1/4NPT(male) | | | | | |
| | G4 | G1/4(male) | F4 | G1/4(female) | | | | | |
| | G2 | G1/2(male) | Nx | Customized | | | | | |
| P805 | 0010 | G | 42 | 02 | D | G4 | Examples of Ordering Code: P805-0010-G-42-02-D-G4 | | |

Whitman Controls, LLC

201 Dolphin Rd
Bristol, CT 06010

Phone: +860-583-1847

Fax: +1-860-583-5293

For Sales Inquiries, Contact:
sales@whitmancontrols.com

For Engineering Inquiries, Contact:
engineering@whitmancontrols.com

Call Toll Free:
Customer Service
800-233-4401 Ext 120

